AMENDMENTS TO THE CLAIMS

1. (Original) A process for preparing a catalyst solid for olefin polymerization by bringing

A. at least one organic transition metal compound,

B. at least one organometallic compound of formula (V)

$$M^1(R^1)_r(R^2)_s(R^3)_t \qquad (V)$$

Where

M^1	is an alkali metal, an alkaline earth metal or a metal of group 13 of the Periodic Table
R^1	is hydrogen, C_1-$_{10}$-alkyl, C_6-C_{15}-aryl, halo-C_1-C_{10}-alkyl, halo-C_6-C_{15}-aryl, C_7-C_{40}-arylalkyl, C_7-C_{40}-alkylaryl, C_1-C_{10}-alkoxy or halo-C_7-C_{40}-alkylaryl, halo-C_7-C_{40}-arylalkyl or halo-C_1-C_{10}-alkoxy,
R^2 and R^3	are each hydrogen, halogen, C_1-C_{10}-alkyl, C_6-C_{15}-aryl, halo-C_1-C_{10}-alkyl, halo-C_6-C_{15}-aryl, C_7-C_{40}-arylalkyl, C_7-C_{40}-alkylaryl, C_1-C_{10}-alkoxy or halo-C_7-C_{40}-alkylaryl, halo-C_7-C_{40}-arylalkyl or halo-C_1-C_{10}-alkoxy,
r	is an integer from 1 to 3

and

s and t	are integers from 0 to 2, where the sum r+s+t corresponds to the valence of M^1.

C) at least one organic compound having at least one functional group containing active hydrogen, wherein the functional group is selected from the groups consisting of hydroxyl

groups, primary and secondary amino groups, mercapto groups, silanol groups, carboxyl groups, amido groups and imido groups,

D) at least one Lewis base and

E) at least one support,

into contact with one another, wherein the components are combined in any order without any isolation of an intermediate.

2. (Original) A process for preparing a catalyst solid for olefin polymerization as claimed in claim 1, wherein the component (B) used is a mixture of at least two different organometallic compounds.

3. (Original) A process for preparing a catalyst solid for olefin polymerization as claimed in claim 2, wherein the component (B) used is a mixture of at least one aluminum-containing organometallic compound and at least one boron-containing organometallic compound.

4. (Currently amended) A process for preparing a catalyst solid for olefin polymerization as claimed in ~~claim 2 or 3~~ claim 2, wherein the component (B) comprises at least two different aluminum-containing organometallic compounds.

5. (Currently amended) A process for preparing a catalyst solid for olefin polymerization as claimed in ~~any of claims 1 to 4~~ claim 1, wherein the functional groups containing active hydrogen of the component (C) are hydroxyl groups.

6. (Original) A process for preparing a catalyst solid for olefin polymerization as claimed in claim 5, wherein the component (C) is a compound of formula (VI)

$$(R^4)_x—A—(OH)_y \qquad (VI)$$

where

A is an atom of group 13, 14 or 15 of the Periodic Table or a group comprising from 2 to 20 carbon atoms

R^4 are identical or different and are each, independently of one another, hydrogen, halogen, C_1-C_{20}-alkyl, C_1-C_{20}-haloalkyl, C_1-C_{10}-alkoxy, C_6-C_{20}-aryl, C_6-C_{20}-haloaryl, C_6-C_{20}-aryloxy, C_7-C_{40}-arylalkyl, C_7-C_{40}-haloarylalkyl, C_7-C_{40}-alkylaryl or C_7-C_{40}-haloalkylaryl or R^4 is an $OSiR_3^5$ group, where

R^5 are identical or different and are each hydrogen, halogen, C_1-C_{20}-alkyl, C_1-C_{20}-haloalkyl, C_1-C_{10}-alkoxy, C_6-C_{20}-aryl, C_6-C_{20}-haloaryl, C_6-C_{20}-aryloxy, C_7-C_{40}-arylalkyl, C_7-C_{40}-haloarylalkyl, C_7-C_{40}-alkylaryl or C_7-C_{40}-haloalkylaryl,

y is at least 1 and

x is an integer from 0 to 41.

7. (New) A process for preparing a catalyst solid for olefin polymerization as claimed in claim 3, wherein the component (B) comprises at least two different aluminum-containing organometallic compounds.

8. (New) A process for preparing a catalyst solid for olefin polymerization as claimed in claim 7, wherein the functional groups containing active hydrogen of the component (C) are hydroxyl groups.

9. (New) A process for preparing a catalyst solid for olefin polymerization as claimed in claim 8, wherein the component (C) is a compound of formula (VI)

$$(R^4)_x—A—(OH)_y \qquad (VI)$$

where

A is an atom of group 13, 14 or 15 of the Periodic Table or a group comprising from 2 to 20 carbon atoms

R^4 are identical or different and are each, independently of one another, hydrogen, halogen, C_1-C_{20}-alkyl, C_1-C_{20}-haloalkyl, C_1-C_{10}-alkoxy, C_6-C_{20}-aryl, C_6-C_{20}-haloaryl, C_6-C_{20}-aryloxy, C_7-C_{40}-arylalkyl, C_7-C_{40}-haloarylalkyl, C_7-C_{40}-alkylaryl or C_7-C_{40}-haloalkylaryl or R^4 is an $OSiR_3^5$ group, where

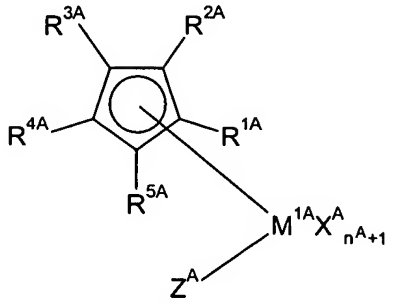
R^5 are identical or different and are each hydrogen, halogen, C_1-C_{20}-alkyl, C_1-C_{20}-haloalkyl, C_1-C_{10}-alkoxy, C_6-C_{20}-aryl, C_6-C_{20}-haloaryl, C_6-C_{20}-aryloxy, C_7-C_{40}-arylalkyl, C_7-C_{40}-haloarylalkyl, C_7-C_{40}-alkylaryl or C_7-C_{40}-haloalkylaryl,

y is at least 1 and

x is an integer from 0 to 41.

10. (New) A process for preparing a catalyst solid for olefin polymerization as claimed in claim 8, wherein the component (A) contains at least one cyclopentadienyl-type ligand.

11. (New) A process for preparing a catalyst solid for olefin polymerization as claimed in claim 1, wherein the component (A) is of the formula (I)



(I)

wherein

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M^{1A} is titanium, zirconium, hafnium, vanadium, niobium, tantalum, chromium, molybdenum or tungsten, or en element of group 3 of the Periodic Table or the lanthanides,

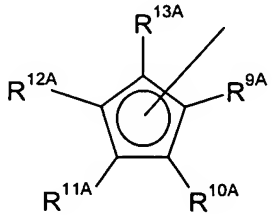
X^A are identical or different and are each, independently of one another, fluorine, chlorine, bromine, iodine, hydrogen, C_1-C_{10}-alkyl, C_2-C_{10}-alkenyl, C_6-C_{15}-aryl, C_7-C_{40}-alkylaryl, C_7-C_{40}-arylalkyl, $-OR^{6A}$ or $-NR^{6A}R^{7A}$ or two radicals X^A are joined to one another and together form, for example, a substituted or unsubstituted diene ligand,

R^{6A} and R^{7A} independently are each C_1-C_{10}-alkyl, C_6-C_{15}-aryl, C_7-C_{40}-arylalkyl, C_7-C_{40}-alkylaryl, fluoroalkyl or fluoroaryl each having from 1 to 16 carbon atoms in the alkyl radical and from 6 to 21 carbon atoms in the aryl radical,

n^A is 1, 2 or 3, where n^A is such that the metallocene complex of the formula (I) is uncharged for the given valence of M,

R^{1A} to R^{5A} are each, independently of one another, hydrogen, C_1-C_{22}-alkyl, 5– to 7 membered cycloalkyl or cycloalkenyl which optionally bear C_1-C_{10}-alkyl groups as substituents, C_2-C_{22}-alkenyl, C_6-C_{22}-aryl, C_7-C_{40}-arylalkyl, C_7-C_{40}-alkylaryl, $-NR^{8A}{}_2$, $-N(SiR^{8A}{}_3)_2$, $-OR^{8A}$, $-OSiR^{8A}{}_3$, $-SiR^{8A}{}_3$, where the radicals R^{1A} to R^{5A} may optionally be substituted by halogen or two radicals R^{1A} to R^{5A}, together with the atoms connecting them optionally be joined to form a five-, six- or seven-membered ring or a five-, six- or seven-membered heterocycle which contains at least one atom selected from the group consisting of N, P, O and S,

R^{8A} are identical or different and can each be C_1-C_{10}-alkyl, C_3-C_{10}-cycloalkyl, C_6-C_{15}-aryl, C_1-C_4-alkoxy or C_6-C_{10}-aryloxy and

Z^A is as defined for X^A or is 

,

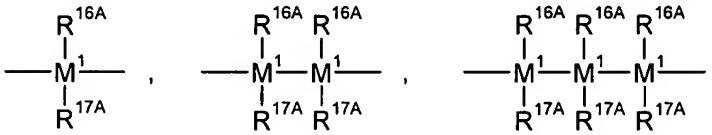
where the radicals

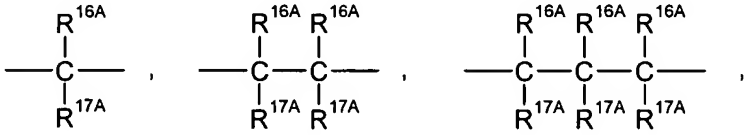
R^{9A} to R^{13A} are each, independently of one another, hydrogen, C_1-C_{22}-alkyl, 5– to 7-membered cycloalkyl or cycloalkenyl which optionally bear C_1-C_{10}-alkyl groups as substituents, C_2-C_{22}-alkenyl, C_6-C_{22}-aryl, C_7-C_{40}-arylalkyl, C_7-C_{40}-alkylaryl, $-NR^{14A}_2$, $-N(SiR^{14A}_3)_2$, $-OR^{14A}$, $-OSiR^{14A}_3$, $-SiR^{14A}_3$, where the radicals R^{1A} to R^{5A} may also be substituted by halogen and/or two radicals R^{1A} to R^{5A} together with the atoms connecting them may be joined to form a five-, six- or seven-membered ring or a five-, six- or seven-membered heterocycle which contains at least one atom selected from the group consisting of N, P, O and S,

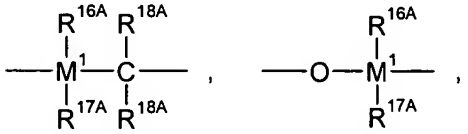
R^{14A} are identical or different and can each be C_1-C_{10}-alkyl, C_3-C_{10}-cycloalkyl, C_6-C_{15}-aryl, C_1-C_4-alkoxy or C_6-C_{10}-aryloxy,

or the radicals R^{4A} and Z^A together form an $-R^{15A}_{vA}-A^A-$ group, where

R^{15A} is







$-BR^{16A}-$, $-(BNR^{16A}R^{17A})-$, $-AlR^{16A}-$, $-Ge-$, $-Sn-$, $-O-$, $-S-$,

$-SO-$, $-SO_2-$, $-NR^{16A}-$, $-CO-$, $-PR^{16A}-$ or $-(POR^{16A})-$,

where

R^{16A}, R^{17A} and R^{18A} are identical or different and are each a hydrogen atom, a halogen atom, a trimethylsilyl group, a C_1-C_{10}-alkyl group, a C_1-C_{10}-fluoroalkyl group, a C_6-C_{10}-

fluoroaryl group, a C_6-C_{10}-aryl group, a C_1-C_{10}-alkoxy group, a C_7-C_{15}-alkylaryloxy group, a C_2-C_{10}-alkenyl group, a C_7-C_{40}-arylalkyl group, a C_8-C_{40}-arylalkenyl group or a C_7-C_{40}-alkylaryl group or two adjacent radicals together with the atoms connecting them form a saturated or unsaturated ring having from 4 to 15 carbon atoms, and

M^{2A} is silicon, germanium or tin,

A^A is –O– , –S– , $-NR^{19A}-$, $-PR^{19A}-$, $-O-R^{19A}$, $-NR^{19A}_2$, $-PR^{19A}_2$

or an unsubstituted, substituted or fused, heterocyclic ring system, where

R^{19A} are each, independently of one another, C_1-C_{10}-alkyl, C_6-C_{15}-aryl, C_3-C_{10}-cycloalkyl, C_7-C_{18}-alkylaryl or $-Si(R^{20A})_3$,

R^{20A} is hydrogen, C_1-C_{10}-alkyl, C_6-C_{15}-aryl which optionally bear C_1-C_4-alkyl groups as substituents or C_3-C_{10}-cycloalkyl,

v^A is 1 or, if A^A is an unsubstituted, substituted or fused, heterocyclic ring system, 1 or 0

or the radicals R^{4A} and R^{12A} together form an $-R^{15A}-$ group.

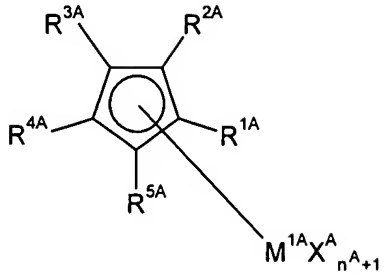
12. (New) A process for preparing a catalyst solid for olefin polymerization as claimed in claim 11, wherein

X^A are identical in the formula (I) are identical and are fluorine, chlorine, bromine, C_1-C_7-alkyl or arylalkyl, or X^A

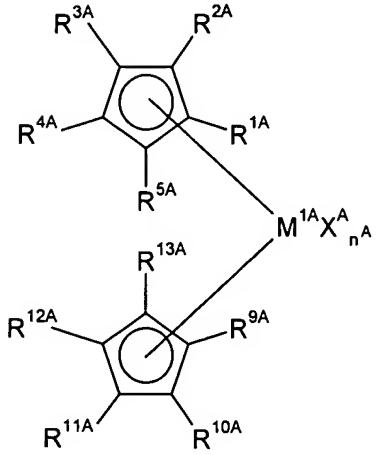
together form, a 1,3-diene ligand, or a biaryloxy group and

M^{2A} is silicon.

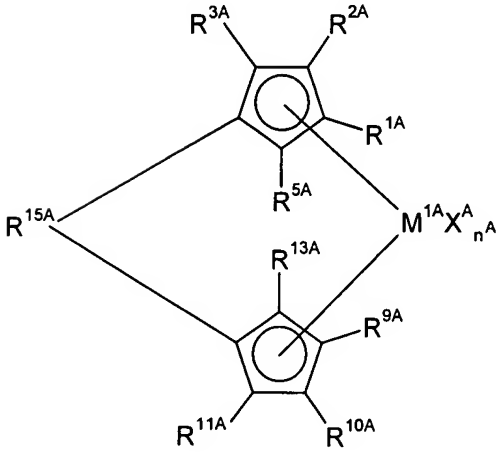
13. (New) A process for preparing a catalyst solid for olefin polymerization as claimed in claim 11, wherein the compound of the formula (I) are selected from the group consisting of


R3A
R2A
R4A
R1A
R5A
M1AXAnA+1

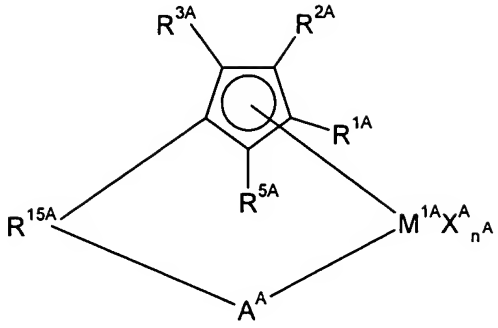
(Ia),


R3A
R2A
R4A
R1A
R5A
M1AXAnA
R13A
R12A
R9A
R11A
R10A

(Ib),


R3A
R2A
R1A
R5A
R15A
M1AXAnA
R13A
R9A
R11A
R10A

(Ic) and



(Id)

wherein in the compounds of the formula (Ia)

M^{1A} is titanium or chromium,

X^A is chlorine, C_1-C_4-alkyl, phenyl, alkoxy or aryloxy,

n^A is 1 or 2 and

R^{1A} to R^{5A} are each hydrogen or C_1-C_4-alkyl or two adjacent radicals R^{1A} to R^{5A} together with the atoms connecting them form a substituted or unsubstituted unsaturated six-membered ring

wherein in the compounds of the formula (Ib)

M^{1A} is titanium, zirconium, hafnium or chromium,

X^A is chlorine, C_1-C_4-alkyl or benzyl, or two radicals X form a substituted or unsubstituted butadiene ligand,

n^A is 1 or 2, or, if M^{1A} is chromium, 0,

R^{1A} to R^{5A} are each hydrogen, C_1-C_8-alkyl, C_6-C_{10}-aryl, $-NR^{8A}_2$, $-OSiR^{8A}_3$, $-SiR^{8A}_3$ or $-Si(R^{8A})_3$ and

R^{9A} to R^{13A} are each hydrogen, C_1-C_8-alkyl, C_6-C_{10}-aryl, $-NR^{8A}_2$, $-OSiR^{8A}_3$, $-SiR^{8A}_3$ or $-Si(R^{8A})_3$

or in each case two radicals R^{1A} to R^{5A} and/or R^{9A} to R^{13A} together with the cyclopentadienyl ring form an indenyl or substituted indenyl system.

wherein in the compounds of the formula (Ic)

R^{1A} and R^{9A} are identical or different and are each hydrogen or a C_1-C_{10}-alkyl group,

R^{5A} and R^{13A} are identical or different and are each hydrogen or a methyl, ethyl, isopropyl or tert-butyl group,

R^{3A} and R^{11A} are each C_1-C_4-alkyl and

R^{2A} and R^{10A} are each hydrogen

or

two adjacent radicals R^{2A} and R^{3A} or R^{10A} and R^{11A} together form a saturated or unsaturated cyclic group having from 4 to 44 carbon atoms,

R^{15A} is $-M^{2A}R^{16A}R^{17A}-$ or $-CR^{16A}R^{17A}-CR^{16A}R^{17A}-$ or $-BR^{16A}-$ or $-BNR^{16A}R^{17A}-$,

M^{1A} is titanium, zirconium or hafnium and

X^A are identical or different and are each chlorine, C_1-C_4-alkyl, benzyl, phenyl or C_7-C_{15}-alkylaryloxy.

wherein in the compounds of the formula (Id)

M^{1A} is titanium or zirconium,

X^A is chlorine, C_1-C_4-alkyl or phenyl or two radicals X together form a substituted or unsubstituted butadiene ligand,

R^{15A} is $-SiR^{16A}R^{17A}-$ or $-CR^{16A}R^{17A}-CR^{16A}R^{17A}-$, and

A^A is $-O-$, $-S-$ or $-NR^{19A}-$,

R^{1A} to R^{3A} and R^{5A} are each hydrogen, C_1-C_{10}-alkyl, C_3-C_{10}-cycloalkyl, C_6-C_{15}-aryl or $-Si(R^{8A})_3$, or two adjacent radicals form a cyclic group having from 4 to 12 carbon atoms.

14. (New) A process for preparing a catalyst solid for olefin polymerization as claimed in claim 9, wherein the component (A) is

bis(cyclopentadienyl)zirconium dichloride,
bis(pentamethylcyclopentadienyl)zirconium dichloride,
bis(methylcyclopentadienyl)zirconium dichloride,
bis(ethylcyclopentadienyl)zirconium dichloride,
bis(n-butylcyclopentadienyl)zirconium dichloride,
bis(1-n-butyl-3-methylcyclopentadienyl)zirconium dichloride,
bis(indenyl)zirconium dichloride,
bis(tetrahydroindenyl)zirconium dichloride,
bis(trimethylsilylcyclopentadienyl)zirconium dichloride

bis(cyclopentadienyl)zirconium dimethyl,
bis(pentamethylcyclopentadienyl)zirconium dimethyl,
bis(methylcyclopentadienyl)zirconium dimethyl,
bis(ethylcyclopentadienyl)zirconium dimethyl,
bis(n-butylcyclopentadienyl)zirconium dimethyl,
bis(1-n-butyl-3-methylcyclopentadienyl)zirconium dimethyl,
bis(indenyl)zirconium dimethyl,
bis(tetrahydroindenyl)zirconium dimethyl,
bis(trimethylsilylcyclopentadienyl)zirconium dimethyl,

dimethylsilanediyl(2-methyl-4-phenylindenyl)-(2,5-dimethyl-N-phenyl-4-azapentalene)zirconium dichloride,
dimethylsilanediylbis(2-methyl-4-phenyl-4-hydroazulenyl)zirconium dichloride,
dimethylsilanediylbis(2-ethyl-4-phenyl-4-hydroazulenyl)zirconium dichloride,

dimethylsilanediylbis(cyclopentadienyl)zirconium dichloride,

dimethylsilanediylbis(indenyl)zirconium dichloride,
dimethylsilanediylbis(tetrahydroindenyl)zirconium dichloride,
ethylenebis(cyclopentadienyl)zirconium dichloride,
ethylenebis(indenyl)zirconium dichloride,
ethylenebis(tetrahydroindenyl)zirconium dichloride,
tetramethylethylene-9-fluorenylcyclopentadienylzirconium dichloride,
dimethylsilanediylbis(3-tert-butyl-5-methylcyclopentadienyl)zirconium dichloride,
dimethylsilanediylbis(3-tert-butyl-5-ethylcyclopentadienyl)zirconium dichloride,
dimethylsilanediylbis(2-methylindenyl)zirconium dichloride,
dimethylsilanediylbis(2-isopropylindenyl)zirconium dichloride,
dimethylsilanediylbis(2-tert-butylindenyl)zirconium dichloride,
diethylsilanediylbis(2-methylindenyl)zirconium dibromide,
dimethylsilanediylbis(3-methyl-5-methylcyclopentadienyl)zirconium dichloride,
dimethylsilanediylbis(3-ethyl-5-isopropylcyclopentadienyl)zirconium dichloride,
dimethylsilanediylbis(2-ethylindenyl)zirconium dichloride,
dimethylsilanediylbis(2-methyl-4,5-benzindenyl)zirconium dichloride
dimethylsilanediylbis(2-ethyl-4,5-benzindenyl)zirconium dichloride
methylphenylsilanediylbis(2-methyl-4,5-benzindenyl)zirconium dichloride,
methylphenylsilanediylbis(2-ethyl-4,5-benzindenyl)zirconium dichloride,
diphenylsilanediylbis(2-methyl-4,5-benzindenyl)zirconium dichloride,
diphenylsilanediylbis(2-ethyl-4,5-benzindenyl)zirconium dichloride,
diphenylsilanediylbis(2-methylindenyl)hafnium dichloride,
dimethylsilanediylbis(2-methyl-4-phenylindenyl)zirconium dichloride,
dimethylsilanediylbis(2-ethyl-4-phenylindenyl)zirconium dichloride,
dimethylsilanediylbis(2-methyl-4-(1-naphthyl)indenyl)zirconium dichloride,
dimethylsilanediylbis(2-ethyl-4-(1-naphthyl)indenyl)zirconium dichloride,
dimethylsilanediylbis(2-propyl-4-(1-naphthyl)indenyl)zirconium dichloride,
dimethylsilanediylbis(2-i-butyl-4-(1-naphthyl)indenyl)zirconium dichloride,
dimethylsilanediylbis(2-propyl-4-(9-phenanthryl)indenyl)zirconium dichloride,
dimethylsilanediylbis(2-methyl-4-isopropylindenyl)zirconium dichloride,
dimethylsilanediylbis(2,7-dimethyl-4-isopropylindenyl)zirconium dichloride,
dimethylsilanediylbis(2-methyl-4,6-diisopropylindenyl)zirconium dichloride,
dimethylsilanediylbis(2-methyl-4-[p-trifluoromethylphenyl]indenyl)zirconium dichloride,
dimethylsilanediylbis(2-methyl-4-[3',5'-dimethylphenyl]indenyl)zirconium dichloride,
dimethylsilanediylbis(2-methyl-4-[4'-tert-butylphenyl]indenyl)zirconium dichloride,

diethylsilanediylbis(2-methyl-4-[4'-tert-butylphenyl]indenyl)zirconium dichloride,
dimethylsilanediylbis(2-ethyl-4-[4'-tert-butylphenyl]indenyl)zirconium dichloride,
dimethylsilanediylbis(2-propyl-4-[4'-tert-butylphenyl]indenyl)zirconium dichloride,
dimethylsilanediylbis(2-isopropyl-4-[4'-tert-butylphenyl]indenyl)zirconium dichloride,
dimethylsilanediylbis(2-n-butyl-4-[4'-tert-butylphenyl]indenyl)zirconium dichloride,
dimethylsilanediylbis(2-hexyl-4-[4'-tert-butylphenyl]indenyl)zirconium dichloride,
dimethylsilanediyl(2-isopropyl-4-phenylindenyl)-(2-methyl-4-phenylindenyl)zirconium dichloride,
dimethylsilanediyl(2-isopropyl-4-(1-naphthyl)indenyl)-(2-methyl-4-(1-naphthyl)indenyl)zirconium dichloride,
dimethylsilanediyl(2-isopropyl-4-[4'–tert-butylphenyl]indenyl)-(2-methyl-4-[4'-tert-butylphenyl]-indenyl)zirconium dichloride,
dimethylsilanediyl(2-isopropyl-4-[4'-tert-butylphenyl]indenyl)-(2-ethyl-4-[4'-tert-butylphenyl]indenyl)-zirconium dichloride,
dimethylsilanediyl(2-isopropyl-4-[4'-tert-butylphenyl]indenyl)-(2-methyl-4-[3',5'-bis-tert-butylphenyl]-indenyl)zirconium dichloride,
dimethylsilanediyl(2-isopropyl-4-[4'-tert-butylphenyl]indenyl)-(2-methyl-4-[1'-naphthyl]indenyl)zirconium dichloride and
ethylene(2-isopropyl-4-[4'-tert-butylphenyl]indenyl)-(2-methyl-4-[4'-tert-butylphenyl]indenyl)zirconium dichloride,
di(2,6-di-i-propylphenyl)-2,3-dimethyldiazabutadienepalladium dichloride,
di(di-i-propylphenyl)-2,3-dimethyldiazabutadienenickel dichloride,
di(2,6-di-i-propylphenyl)-2,3-dimethyldiazabutadienedimethylpalladium,
di(2,6-di-i-propylphenyl)-2,3-dimethyldiazabutadienedimethylnickel,
di(2,6-dimethylphenyl)-2,3-dimethyldiazabutadienepalladium dichloride,
di(2,6-dimethylphenyl)-2,3-dimethyldiazabutadienenickel dichloride,
di(2,6-dimethylphenyl)-2,3-dimethyldiazabutadienedimethylpalladium,
di(2,6-dimethylphenyl)-2,3-dimethyldiazabutadienedimethylnickel,
di(2-methylphenyl)-2,3-dimethyldiazabutadienepalladium dichloride,
di(2-methylphenyl)-2,3-dimethyldiazabutadienenickel dichloride,
di(2-methylphenyl)-2,3-dimethyldiazabutadienedimethylpalladium,
di(2-methylphenyl)-2,3-dimethyldiazabutadienedimethylnickel,
diphenyl-2,3-dimethyldiazabutadienepalladium dichloride,
diphenyl-2,3-dimethyldiazabutadienenickel dichloride,
diphenyl-2,3-dimethyldiazabutadienedimethylpalladium,
diphenyl-2,3-dimethyldiazabutadienedimethylnickel,
di(2,6-dimethylphenyl)azanaphthenepalladium dichloride,

di(2,6-dimethylphenyl)azanaphthenenickel dichloride,
di(2,6-dimethylphenyl)azanaphthenedimethylpalladium,
di(2,6-dimethylphenyl)azanaphthenedimethylnickel,
1,1'-bipyridylpalladium dichloride,
1,1'-bipyridylnickel dichloride,
1,1'-bipyridyldimethylpalladium,
1,1'-bipyridyldimethylnickel,

1-(8-quinolyl)-2-methyl-4-methylcyclopentadienylchromium(III) dichloride,
1-(8-quinolyl)-3-isopropyl-5-methylcyclopentadienylchromium(III) dichloride,
1-(8-quinolyl)-3-tert-butyl-5-methylcyclopentadienylchromium(III) dichloride,
1-(8-quinolyl)-2,3,4,5-tetramethylcyclopentadienylchromium(III) dichloride,
1-(8-quinolyl)tetrahydroindenylchromium(III) dichloride,
1-(8-quinolyl)indenylchromium(III) dichloride,
1-(8-quinolyl)-2-methylindenylchromium(III) dichloride,
1-(8-quinolyl)-2-isopropylindenylchromium(III) dichloride,
1-(8-quinolyl)-2-ethylindenylchromium(III) dichloride,
1-(8-quinolyl)-2-tert-butylindenylchromium(III) dichloride,
1-(8-quinolyl)benzindenylchromium(III) dichloride,
1-(8-quinolyl)-2-methylbenzindenylchromium(III) dichloride,
1-(8-(2-methylquinolyl))-2-methyl-4-methylcyclopentadienylchromium(III) dichloride,
1-(8-(2-methylquinolyl))-2,3,4,5-tetramethylcyclopentadienylchromium(III) dichloride,
1-(8-(2-methylquinolyl))tetrahydroindenylchromium(III) dichloride,
1-(8-(2-methylquinolyl))indenylchromium(III) dichloride,
1-(8-(2-methylquinolyl))-2-methylindenylchromium(III) dichloride,
1-(8-(2-methylquinolyl))-2-isopropylindenylchromium(III) dichloride,
1-(8-(2-methylquinolyl))-2-ethylindenylchromium(III) dichloride,
1-(8-(2-methylquinolyl))-2-tert-butylindenylchromium(III) dichloride,
1-(8-(2-methylquinolyl))benzindenylchromium(III) dichloride,
1-(8-(2-methylquinolyl))-2-methylbenzindenylchromium(III) dichloride,

[1,3,5-tri(methyl)-1,3,5-triazacyclohexane]chromium trichloride,
[1,3,5-tri(ethyl)-1,3,5-triazacyclohexane]chromium trichloride,
[1,3,5-tri(octyl)-1,3,5-triazacyclohexane]chromium trichloride,
[1,3,5-tri(dodecyl)-1,3,5-triazacyclohexane]chromium trichloride or

[1,3,5-tri(benzyl)-1,3,5-triazacyclohexane]chromium trichloride.

15. A process for preparing a catalyst solid for olefin polymerization as claimed in claim 1,wherein in formula (V)

M^1 is lithium, boron, magnesium or aluminum and

R^1, R^2 and R^3 are each C_1-C_{10}-alkyl.

16. A process for preparing a catalyst solid for olefin polymerization as claimed in claim 1, wherein said metal compounds of the formula (V) are n-butyllithium, n-butyl-n-octylmagnesium, n-butyl-n-heptylmagnesium, triphenylaluminum, triisoprenaluminum, tri-n-octylaluminum, tri-n-hexylaluminum, tri-n-butylaluminum, triisobutylaluminum, tri-n-propylaluminum, tri-isopropylaluminum, triethylaluminum, trispentafluorophenylborane, trimethylaluminum or mixtures thereof.

17. A process for preparing a catalyst solid for olefin polymerization as claimed in claim 14, wherein said metal compounds of the formula (V) are n-butyllithium, n-butyl-n-octylmagnesium, n-butyl-n-heptylmagnesium, triphenylaluminum, triisoprenaluminum, tri-n-octylaluminum, tri-n-hexylaluminum, tri-n-butylaluminum, triisobutylaluminum, tri-n-propylaluminum, tri-isopropylaluminum, triethylaluminum, trispentafluorophenylborane, trimethylaluminum or mixtures thereof.

18. A process for preparing a catalyst solid for olefin polymerization as claimed in claim 1, wherein said metal compounds of the formula (V) are borinic acids of the formula $R^4{}_2B(OH)$ or boronic acids of the formula $R^4B(OH)_2$.

19. A process for preparing a catalyst solid for olefin polymerization as claimed in claim 1, wherein said lewis acid is methylamine, aniline, dimethylamine, diethylamine, N-methylaniline, diphenylamine, trimethylamine, triethylamine, tripropylamine, tributylamine, N,N-dimethylaniline, N,N-diethylaniline or N,N-dimethylcyclohexylamine, benzylamine, N-benzyldimethylamine, N-benzyldiethylamine, N-benzylbutylamine, N-benzyl-tert-butylamine, N'-benzyl-N,N-dimethylethylenediamine, N-benzylethylenediamine, N-benzylisopropylamine, N-benzylmethylamine, N-benzylethylamine, N-benzyl-1-phenylethylamine, N-benzyl-2-phenylethylamine or N-benzylpiperazine.

20. A process for preparing a catalyst solid for olefin polymerization as claimed in claim 17, wherein said lewis acid is methylamine, aniline, dimethylamine, diethylamine, N-methylaniline, diphenylamine,

trimethylamine, triethylamine, tripropylamine, tributylamine, N,N-dimethylaniline, N,N-diethylaniline or N,N-dimethylcyclohexylamine, benzylamine, N-benzyldimethylamine, N-benzyldiethylamine, N-benzylbutylamine, N-benzyl-tert-butylamine, N'-benzyl-N,N-dimethylethylenediamine, N-benzylethylenediamine, N-benzylisopropylamine, N-benzylmethylamine, N-benzylethylamine, N-benzyl-1-phenylethylamine, N-benzyl-2-phenylethylamine or N-benzylpiperazine.